

REMARKS

This Amendment is submitted in response to the final Office Action mailed on June 15, 2004. Claims 1, 8, 21, 25 and 31 have been amended and claims 1, 6-8, 10-14, 18-21, 23-25, 27-31 and 33-41 remain in the present application. In view of the foregoing amendments, as well as the following remarks, Applicants respectfully submit that this application is in complete condition for allowance and request reconsideration of the application in this regard.

Claims 1, 7, 8, 10 and 19 stand rejected under 35 U.S.C. §102(b) as being anticipated by Perkins, U.S. Patent No. 1,829,236. Claims 1, 6-8, 10-14, 18-20, 25, 27-31 and 33-41 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Claes et al., U.S. Patent No. 5,326,138. Lastly, claims 6, 18, 20, 21, 23 and 24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Perkins. While Applicants respectfully traverse these rejections, Applicants have amended each of independent claims 1, 8, 21, 25 and 31 to more sharply define the present invention over the prior art of record and respectfully request that the rejections be withdrawn.

By way of background, the present invention is directed to a pipe coupling for interconnecting adjacent ends of first and second pipe sections, wherein the end of the first pipe section has an annular corrugation. The pipe coupling comprises a generally cylindrical metal sleeve having first and second sides. The sleeve is formed from a sheet material and has at least one rigid and

radially inwardly directed annular corrugation formed across its width prior to securement of the sleeve about the first pipe section end.

The annular corrugation is oriented perpendicular to a longitudinal axis of the sleeve and is configured to cooperatively engage the annular corrugation on the first pipe section end when the sheet is wrapped around the first pipe section end to secure the sleeve on the first pipe section end and thereby prevent separation of the sleeve from the first pipe section. A bell is provided on the second side of the sleeve and has an inner wall of generally constant diameter. The bell slidably receives in an axial direction the second pipe section end within the sleeve.

One of the advantages of the present invention is the ability to secure the pipe coupling to the annular corrugation on the first pipe section end at the site of manufacture. The first pipe section end and the attached pipe coupling are then transported to the field, where the second pipe section is coupled to the bell simply by sliding the second pipe section into the bell. In this way, the adjacent ends of the first and second pipe sections are easily coupled together without requiring extension manipulations of the pipe sections in the field.

To more sharply define the present invention over the prior art of record, Applicants have amended each of independent claims 1, 8, 21, 25 and 31 to recite that the radially inwardly directed annular corrugation on the sleeve is located adjacent a free end of the sleeve on the first side thereof. Each of these

claims has further been amended to recite that no portion of the sleeve extends radially inwardly between the annular corrugation and the bell so that the first and second pipe section ends are capable of abutting. Support for these amendments is found on Page 9, lines 20-24 and Page 11, lines 14-24 of Applicants' disclosure, for example, and in the Figures. Applicants respectfully submit that amended independent claims 1, 8, 21, 25 and 31, and claims depending therefrom, clearly define over the prior art of record and respectfully request that the rejections be withdrawn.

Perkins is directed to a pipe joint comprising a coupling band or sleeve (16, 21) which encircles the opposing ends of pipe sections (10, 11). In each of the pipe joint embodiments of Figs. 1 and 2, the pipe joint (16, 21) includes an inwardly directed corrugated fold (19, 26) disposed substantially centrally of the sleeve. The inwardly directed corrugated fold (19, 26) extends into the space between the abutting ends of the pipe sections and forms a yieldable spacer between the ends of the pipe sections to permit them to flex in the direction of their length and radially of the joint (see Lines 60-73). The fold (19, 26) of the sleeve extends an appreciable distance into the space between the opposing pipe sections and its side walls bear against the end faces thereof (see Lines 78-85).

With respect to the rejections of independent claims 1 and 8 as being anticipated by Perkins, and claim 21 as being unpatentable over Perkins, Applicants respectfully submit that Perkins does not teach or suggest a sleeve as claimed,

wherein no portion of the sleeve extends radially inwardly between the annular corrugation on the sleeve and the bell as now claimed so that the first and second pipe section ends are capable of abutting. Rather, Perkins teaches away from the present invention as recited in independent claims 1, 8 and 21 since it discloses the inwardly directed fold (19, 26) which extends radially inwardly between the annular corrugations on the sleeve and the asserted bell and which fold (19, 26) is positioned between the pipe section ends so that the pipe section ends are not capable of abutting as now claimed by Applicants.

Applicants respectfully submit that one of ordinary skill in the art would not be motivated to dispense with the fold (19, 26) on the sleeve since this would clearly destroy the intended purpose, function and structure of the Perkins pipe coupling. Accordingly, Applicants respectfully submit that Perkins taken alone, or in combination with the other prior art of record, fails to teach or suggest the present invention as recited in independent claims 1, 8 and 21 and the rejections of these claims should be withdrawn.

Claes et al. is directed to a plastic sleeve having opposite ends which define opposite facing coupling bells (C) for receiving respective ends of corrugated tubing (B). Each end of the corrugated tubing (B) is inserted, in an axial direction within each of the respective bells. The sleeve has an inward valley or stop (10) annularly disposed around its geometric center. The stop (10) serves to limit the

extent of engagement of the tubing ends to assure that each is received to the same depth within the sleeve (see Column 3, lines 46-52).

With respect to the rejections of independent claims 1, 8, 25 and 31 as being unpatentable over Claes et al., Applicants respectfully submit that Claes et al. does not teach or suggest a sleeve as claimed, wherein the annular corrugation on the sleeve is located adjacent a free end of the sleeve on one side thereof, and further wherein no portion of the sleeve extends radially inwardly between the annular corrugation on the sleeve and the bell so that the first and second pipe section ends are capable of abutting as now claimed. Rather, Claes et al. teaches away from the present invention as recited in independent claims 1, 8, 25 and 31 since it discloses that the inward valley or stop (10) is disposed around the geometric center of the sleeve and is therefore not located adjacent a free end of the sleeve on one side thereof as now claimed. Moreover, Claes et al. discloses that the inward valley or stop (10) extends radially inwardly between the pipe section ends so that the pipe section ends abut the stop (10) and are therefore not capable of abutting as now claimed by Applicants.

Applicants respectfully submit that one of ordinary skill in the art would not be motivated to modify the inward valley or stop (10) on the sleeve since this would destroy the intended purpose, function and structure of the Claes et al. sleeve. Accordingly, Applicants respectfully submit that Claes et al. taken alone, or in combination with the other prior art of record, fails to teach or suggest

that the combination of elements or steps recited in independent claims 1,8, 25 and 31 and the rejections of these claims should be withdrawn.

Moreover, as claims 6, 7, 10-14, 18-20, 23, 24, 27-30 and 33-41 depend from allowable independent claims 1, 8, 21, 25 and 31, respectively, and further as each of these claims recites a combination of elements or steps not taught or suggested by the prior art of record, Applicants respectfully submit that these claims are allowable as well.

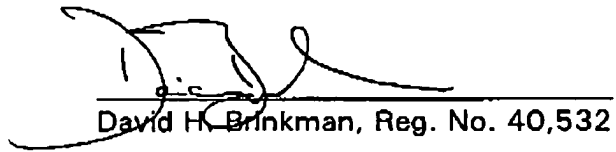
Conclusion

In view of the foregoing response including the amendments and remarks, this application is submitted to be in complete condition for allowance and early notice to this affect is earnestly solicited. If there is any issue that remains which may be resolved by telephone conference, the Examiner is invited to contact the undersigned in order to resolve the same and expedite the allowance of this application.

Applicants do not believe that this response requires that any fees be submitted, however, if any fees are deemed necessary, these may be charged to Deposit Account No. 23-3000.

Respectfully submitted,

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